

AMENDMENT TO CLAIMS:

Claims:

1. (original) A co-axial, multi-rotor wind turbine having a multiplicity of rotors attached at spaced intervals to a driveshaft, with means to furl sideways to the wind to protect it from overspeed.
2. (original) The wind turbine of claim 1 wherein said means to furl sideways comprises a yaw bearing and a horizontal offset means that supports said turbine at a distance from said yaw bearing, a tail that acts to keep the turbine headed substantially into the wind during normal operation, and means for allowing the tail to be blown to a neutral position in excessively strong winds so that the turbine may be allowed to be blown downwind of said yaw bearing and thereby become oriented across the wind, so that the rotors are oriented substantially at right angles to the wind, whereby the rotors produce a reduced amount of power, thereby protecting the turbine from overspeed.
3. (original) The wind turbine of claim 2 wherein said tail has means for keeping said tail in a normal position during normal operation, and further having means to allow the tail to be in a neutral position in high winds, so that the turbine can be blown downwind of said yaw bearing in excessively strong winds, thereby turning the turbine across the wind to protect it from overspeed.
4. (original) The wind turbine of claim 3 wherein said means for keeping said tail in a normal position during normal operation, and said means to allow the tail to be in a neutral position in high winds, comprise a tail pivot that is angled back from vertical, substantially toward the downwind section of the driveshaft, whereby gravity tends to pull the tail toward the downwind section of the driveshaft during normal operation.
5. (original) The wind turbine of claim 4 wherein the travel of said tail toward said downwind section of said driveshaft is stopped by a tail stop.
6. (currently amended) A co-axial, multi-rotor turbine having rotors attached at spaced intervals to a driveshaft, said spaced intervals being large enough to allow a supply of fresh wind, substantially undisturbed by upwind rotors, to reach each rotor, wherein ~~one~~ said spaced interval is large enough to allow said turbine to be mounted atop an elevation means ~~that is wider than a normal tower~~ without contact between said rotors and said elevation means.

7. (currently amended) The wind turbine of claim 6 wherein said elevation means is a wide tower.
8. (original) The wind turbine of claim 6 wherein said elevation means is a tripod tower.
9. (original) The wind turbine of claim 6 wherein said elevation means is a tower having guy wires that attach near the top of the tower at a point higher than the lowest points that said rotors reach.
10. (original) The wind turbine of claim 6 wherein said elevation means is a building.
11. (original) A wind turbine, comprising:
 - a series of substantially horizontal axis type rotors attached in a substantially coaxial manner at spaced intervals along a driveshaft;
 - said driveshaft aimed sufficiently parallel to the wind for the rotors to effectively harness the wind, but at an offset angle from the wind direction, sufficient to allow an admixture of fresh air, substantially undisturbed by upwind rotors, to each rotor;
 - said driveshaft held in a rotationally free, cantilevered manner, by a cantilevered bearing means from which it projects;
 - wherein at least part of said driveshaft projects from said cantilevered bearing means substantially toward the wind;
 - wherein said offset angle is in the horizontal plane;
 - said wind turbine further comprising passive means to maintain a heading at said offset angle from the wind direction during normal operation.
12. (new) The wind turbine of claim 1 wherein said means to furl sideways comprises a yaw bearing and a horizontal offset means that supports said turbine at a distance from said yaw bearing.
13. (new) The wind turbine of claim 1 wherein said means to furl sideways comprises a yaw bearing and a horizontal offset means that supports said turbine at a distance from said yaw bearing, so that the turbine may be allowed to be blown downwind of said yaw bearing and thereby become oriented across the wind, so that the rotors are oriented substantially at right angles to the wind, whereby the rotors produce a reduced amount of power, thereby protecting the turbine from overspeed.

14. (new) The wind turbine of claim 11 wherein said passive means to maintain a heading at said offset angle comprises a yaw bearing and a horizontal offset means that supports said turbine at a distance from said yaw bearing

15. (new) A method

for mounting a plurality of horizontal axis wind turbine rotors on a building having a top surface;
for providing freedom for each of said rotors to rotate on its own axis;
for providing directional freedom to collectively aim said rotors in any direction in response to the wind,

for mechanically coupling, in a manifold fashion, all said rotors to drive one load,

for preventing strikes of the building by the blades of said rotors,

and for providing fresh wind to each rotor, substantially undisturbed by upwind rotors, so that all rotors contribute power to drive the load,

comprising the following steps:

providing a yaw bearing means proximate said top surface of said building;

providing a bearing support means mounted on said yaw bearing means;

whereby said yaw bearing means provides rotational freedom to aim said bearing support means;

providing at least one bearing mounted on said bearing support means;

providing a driveshaft mounted in said bearing;

whereby said bearing allows said driveshaft to rotate about the longitudinal axis of said driveshaft;

whereby said driveshaft may be aimed in any direction;

whereby said driveshaft has sufficient length to overhang the periphery of said top surface of said building, whatever direction said driveshaft may aim;

mounting said rotors on said driveshaft, said rotors separated by at least one spaced interval,

said interval being of sufficient magnitude to provide sufficient clearance between said rotors and said building, whereby said rotors do not strike said building, whatever direction said driveshaft may aim;

aiming said driveshaft at an offset angle α to the wind direction;

whereby each of said rotors is so placed, in relation to the wind direction and other said rotors, to substantially avoid the wake of other said rotors, and is thereby exposed to fresh wind,

substantially undisturbed by upwind rotors, so that all rotors can substantially contribute to the rotation of the driveshaft, and;

coupling a load to said driveshaft;

whereby said driveshaft drives said load.

16. (new) The method of claim 15 wherein a portion of said rotors extends below said top surface.

17. (new) The method of claim 15 wherein a portion of said rotors extends below a portion of said top surface.

18. (new) The method of claim 15 wherein a portion of said rotors extends below the highest height reached by said top surface.

19. (new) The method of claim 15, further comprising:

aiming said driveshaft across the wind in excessive winds to protect from overspeed.

20. (new) The turbine of claim 6, wherein said spaced intervals are substantially equal.